

ABSTRACT OF THE DISCLOSURE

Provided is a method of semiconductor device fabrication capable of rounding the sharp edge portions of trenches so as to form device isolation regions having high electrical reliability. A
5 semiconductor substrate comprising a lattice-strain relaxed silicon germanium layer, a silicon germanium layer, and a lattice strained silicon layer formed in this order of mention onto a silicon substrate is used, while trenches are formed in the portions for device isolation regions of the semiconductor substrate by etching. Then,
10 a silicon film is deposited on the entirety of the exposed surface, and the deposited silicon film is dry-oxidized so as to form a silicon dioxide film. As a result, the edge portions of the trenches are rounded.